WHICH CHILDREN SHOULD ATTEND SIGHT-SAVING CLASSES?

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WHICH CHILDREN SHOULD ATTEND SIGHT-SAVING CLASSES?

Dr. M. Bartels

(Abridged translation* by Peter C. Kronfeld, M.D., University of Chicago)

For those whose defects are stationary, the range of vision should ordinarily lie between 2/50 and 1/4, with a few exceptions up to 1/3 and down to 1/50. Most cases of refractive error are to be considered purely according to their range of vision. Those who have myopia of more than eight diopters at the time of commencing school life should be included, but need to attend the special classes only for departments of study that particularly tax their visual acuity. Children who suffer from asthenopia but have good visual acuity should be under medical care, but should not be placed in sight-saving classes. The address was delivered before the fifty-first meeting of the Rhenish and Westphalian Ophthalmologists, Düsseldorf, Germany, November 27, 1927; and the translation is now published by request of the National Society for the Prevention of Blindness.

There is a group of children who fall into a class between those who are totally blind and those who are normal. These are children who have too much vision to allow them to attend a school for the blind, and yet have so little vision that they are unable to keep up with their work in the regular schools. If they are permitted to attend a blind school, they are difficult to teach in the regular way because they use vision instead of touch for learning the blind script. If they are permitted to go to an ordinary school, their mental development is stunted.

Educators in many countries have learned by experience through several decades that these children can be taught very well in special classes. Of great importance is the fact that the classes are much smaller than those in the regular schools. Ten or at the most fifteen students are assigned to one class. The time of teaching, reading, and writing is limited to ten or fifteen minutes, and most of the instructing is done verbally. The senses of hearing and touch are chiefly used, and in this way the eye is saved as much as possible.

Principles of selection of children for these schools

In the first place we shall consider the children with permanently defective vision. The problem of how poor the vision must be to justify acceptance in a sight-saving school involves two questions:

a. Which children have too much visual disturbance to be taken into a sight-saving school and therefore should be in an institution for the blind?

b. Which children have not vision enough to attend a regular school?

* The author has given formal permission for publication of this abridged translation of the original address which appeared in the Klinische Monatsblätter für Augenheilkunde, 1927, volume 79, page 796. The abridgement has been made by the author himself.

Thus we get the upper and the lower limit for visual acuity. We have been taught by practical experience that the minimum amount of vision which enables otherwise normal children to attend sight-saving schools is very low. I myself know several children with retinitis pigmentosa and vision of 1/50 who (being watched very carefully) got along very nicely even in regular schools and learned to read and write large script. That does not hold true except for mentally normal children, who alone should be taken into sight-saving schools. Feeble-minded children belong in special schools.

It depends not only on the clearness of vision, but also on the teacher, the parents, and the other pupils whether or not children with visual acuity of 1/50 make progress in a sight-saving school. At any rate it should be tried, as the results so far have shown that it can be done. Such children are retarded unjustly in institutions for the blind. Children are found there with as much visual acuity as 7/50 who before being placed in the blind schools had already learned to read and write, but who on account of their poor vision did not get along in the regular school and for that reason fell behind the children with good vision. Then they forgot reading and writing and learned the blind script poorly.

In my paper on the definition of blindness and the problem of sight-saving, I fixed the lowest limit for sight-saving at a visual acuity of 2/50. It was this same limit which was agreed upon at the Blind Congress (in 1927). The resolutions there accepted say: "A child is blind or practically blind with a vision of from 0 to 1/25". This vision does not enable the child to get education as a normal child nor an orientation which is based on visual impressions, nor training for a trade for which sight is necessary. The child is "poor-sighted" with a visual acuity of from 1/25 to 1/4 if this vision is sufficient to learn reading and writing in the manner of a seeing person, using the principles of hygienic pedagogy, and if the vision is sufficient to learn a trade in the manner of a seeing person.

This upper limit for blindness, which also represents the lowest for persons classified as having impaired vision, can be fixed at 1/50 (counting fingers at three feet) provided the special conditions mentioned before are fulfilled. Berlin even accepts children with a visual acuity of 1/50 for sight-saving schools. Leipzig does the same, Hamburg has set the limit at 2/50. Strassburg sends children with 1/50 to an institution for the blind.

The upper limit for poor sight varies much more. The reports about sight-saving schools state that the upper limit was raised after some time. Strassburg takes all children out of the regular school who have less than one-fifth in the better eye. Hamburg and Leipzig do the same. Berlin has set the upper limit at a vision of one-third, which is certainly very extreme for the upper limit, and only under very unfavorable conditions justifies education in sight-saving schools. The sight of most of these children is in danger.

Altogether we have to postulate for "poor sight" an extreme lower limit of visual acuity of 1/50 with normal visual field, and extreme upper limit of one-third. The author has not been able to learn from the English and American literature what the practical limits are for sight-saving schools in those countries.

We divide the children with endangered sight into two groups: 1, those with a tendency to inflammation of the refracting media or severe diseases of the eye-grounds, 2, those with anomalies of refraction—hyperopia, astigmatism, and myopia—and those with asthenopia.

The diseases of the eye in the first group are chiefly: phlyctenular keratitis, interstitial keratitis, choroiditis, retinitis, and optic neuritis. Here the eye physician in charge alone decides

as to admission. These children are the hardest to manage, as every eye physician knows and as Irwin observes, because, with or without a permit, they play truant month after month. They may be sent to the sight-saving class for a certain period, if the present condition of the eyes does not allow of reading and writing to the extent necessary in the regular schools. After being cured, they may return to the regular schools.

As far as hyperopia and astigmatism are concerned the selection for the sight-saving class is very simple. All the children who after very careful correction (I have very often noticed a lack of attention in this matter) have not more than one-fourth to one-third vision belong to the sight-saving class. The same holds true for children with amblyopia and nystagmus without much error of refraction. Stricker pleads that far-sighted children with more than eight diopters or those with asthenopia and more than five diopters of error belong to the sight-saving class. I must disapprove of this because the visual acuity is the only important point. It has never been proved that far-sighted eyes are harmed in the regular schools.

Concerning myopia, opinions vary greatly, depending principally on how much influence close work and eye-strain are thought to have on the origin and progress of myopia. It is remarkable that in Germany, where the fear of "school myopia" was inaugurated by the investigation of H. Cohn, the ophthalmologists lay much less stress on this point than in other countries. Most German ophthalmologists now seem of the opinion that the onset of myopia can not be prevented, because it depends upon an hereditary factor, and that the children if carefully corrected can attend public schools without any harm.

Entirely different are the opinions in England and America. Here the sight-saving classes were founded for myopes. I do not find in the reports from the Anglo-Saxon countries any proof that avoidance of close work has prevented moderate myopia. Anyway, considering our uncertain knowledge as to the influence of close work, one should rather be overcautious and send to the sight-saving class a child who has an error of —8 diopters at the age of six years, especially if observation by an ophthalmologist has shown progression and if the child comes from a family with progressive myopia.

However skeptical one may be as to the influence of close work, it is very striking to encounter patients who acquired corneal scars in early childhood and were forced to hold objects very near. These patients very often become near-sighted, which is fortunate for them.

I cannot approve of the postulate of Stricker and Kerr that myopes with five diopters belong to the sight-saving class. If a myopia of five diopters turns out to be progressive in the regular school, the child can always be sent to a sight-saving class, but this should not be done as a rule, because the education in these special schools (at least in Germany) is designed for children with defective sight. These children are supposed to learn reading and writing of average-sized script and print if possible.

In England and America, myopes are taken care of in a way that is unknown in Germany. It can be understood why Kerr wants to have seven or eight per cent of the pupils in the regular schools sent to special classes, as even low degrees of myopia are thought to need special attention. But we cannot include these moderate degrees of myopia in the group of children with endangered sight.

The ophthalmologist is supposed to make the final decision. In order to establish some limit, I should like to consider the myopia of eight diopters as the border line unless changes in the eye grounds or other disturbances speak for transfer to a sight-saving class. The question of instruction of myopes ought to be discussed by all

ophthalmologists as to the principal problems concerning the influence of close work, of the wearing spectacles, and of heredity. I desire to plead for discussion of these questions first at national meetings and then at one of the international meetings.

From reading American and English literature about asthenopia I have received the impression that in these countries too much emphasis is laid upon complaints by some children as to fatigue and glare. These are nervous children, provided they are wearing the proper correction. These children should not be upheld in the belief that they have defective sight or real eye disease, by being taken to a sight-saving class. On the contrary, this idea should be removed by suggestion. An ophthalmologist or a neurologist should take charge of them.

Selection for the sight-saving class

I have pointed out which children belong to the sight-saving class, but as a matter of fact it is a difficult task to get hold of all these children. The school teachers usually pick them out first. The second examination is made by the school physician or by an eye physician. I think that the eye physician ought to make the second examination. He commonly has a great many children referred to him, but of those so referred he usually picks out only ten per cent for the sight-saving class, for the other ninety per cent can be sufficiently improved by glasses or are suffering from eye disorders which require attention.

In spite of this system of selection, a certain number of children are overlooked because of movements of population. The examination of children in the primary grades is not sufficient. Every new pupil should also be examined. It is very hard to get hold of children with endangered sight. They do not go to school regularly, the teacher scarcely knows of them. Unless they are watched very carefully by the school they fall into idle habits, do not learn anything; and they become a burden to the community and are usually placed in institutions for the blind in order to shift the responsibility on to the state. The eye physicians should take personal charge of these children. They ought to keep them under observation and to tell the parents about the special schools. Except in Saxony there is no legal regulation by which children with defective vision are compelled to attend sight-saving schools. Unquestionably legislation will be necessary to deal with this matter.

Everybody who is told about these sight-saving schools asks first: How can children with defective sight attend school safely? Experience has shown that they do get to school without being hurt. In Hamburg, the journey to school takes almost an hour, and no accident has yet been recorded. If necessary the cities must provide guides and free car fare as they do in London. The children very soon learn to find their way alone.

The inmates of institutions for the blind should also be reexamined. According to statements made at the last congress for the care of the blind, in Königsberg, in August, 1927, one-fifth of all inmates of institutions for the blind are not blind, but have defective sight. They belong, so far as the children are concerned, to a sight-saving class.

There is not sufficient reason for combining sight-saving schools with institutions for the blind. The state and the children gain if the latter are taken out of institutions for the blind. So far as I can find, only in Hamburg and Milwaukee are children with defective sight kept in institutions for the blind. These children should not be stamped as blind.

There is no doubt that the connection with institutions for the blind usually gives very good results from the fact that the teachers are especially interested and trained in this subject.

This, however, should be regarded

as only a makeshift, should be given up where it already exists, and should not be newly established. I object to special classes as additions to blind schools according to the decision of the congress for the blind in 1927. As a makeshift, however, the arrangement could be kept going until boarding schools were established for children with defective sight who lived in the country or in small cities. The children should get the idea of seeing and not being blind.

The state would have to support these children as it does the blind and cripples. It is more profitable for the state to support children with defective sight than blind children. At the present time we are far from the condition demanded by Irwin, namely, that every city with a population of 20,000 shall have its own sight-saving school. One of the reasons is the lack of trained teachers.

If our feelings do not urge us to found these schools, other motives may be found which are more impelling. Kerr says that more valuable members of society are developed in sight-saving schools than in institutions for the crippled and tuberculous. The practical American, thinking in terms of dollars, realizes that every community which does not establish sight-saving schools has to pay for the fact in dollars and cents in a loss of economic power. (Irwin.)

Fortunately, the German government is now interested in the matter. We hope that the government will see that all the forces and all the experiences acquired in various places are combined, that means of teaching are discussed and finally agreed upon. The city of Dortmund has granted money on a large scale which is at the disposal of ophthalmologists and school experts for the study of existing institutions.

The principal duties of the eye physician are to make the final selection for the sight-saving school, to see that the children with endangered sight are sent to these schools, and to keep track of all the students there. The physician who is in charge of a school should not treat the children himself, he should only decide when treatment is necessary and make the arrangements.

Summary

To sight-saving schools belong:

1. Children whose sight is defective because of stationary anomalies of the eye with a visual acuity within the limits 2/50 and 1/4.

   Children with 1/50 or 1/3 can be accepted under special conditions.

2. Children with endangered sight:

   a. Children with recurrent diseases of the anterior segment or with active conditions of the posterior segment of the eye. Some of these children should be taken into these schools temporarily, some permanently.

   b. Children with anomalies of refraction (children with hyperopia and astigmatism according to the visual limits given under 1).

   Myopes: Children who begin school with eight or more diopters of myopia. If there is a history of extreme myopia in the family, then even lower degrees of myopia may be taken in sight-saving schools. These children attend the sight-saving school only for subjects which involve special eye-strain.

Children with asthenopia and good visual acuity without progressive changes in the eye should be taught in regular schools and taken care of by ophthalmologists and neurologists. In the large cities the children with visual disturbances should be picked out first by the teachers and then referred to the school physicians. These make a second selection and turn the children over to the ophthalmologist who has to make the final decision.

Children with endangered sight should be referred to these schools by the eye physicians who are in charge of the case.

The state should support sight-saving schools just as it does institutions for the blind.

The subject should be discussed at national and later at international meetings, as soon as possible.

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[1] (The following references are reproduced from the original article, although most of them relate to the historical division of the essay, here omitted.)

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